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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,832	03/22/2006	Yusuke Konagai	YAMA:123	9260

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EXAMINER
PAUL, DISLER

ART UNIT	PAPER NUMBER
2615	

MAIL DATE	DELIVERY MODE
07/09/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/572,832	KONAGAI, YUSUKE	
	Examiner	Art Unit	
	DISLER PAUL	2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *3/22;8/14/06; 10/17,26/07;4/9/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated over Aylward et al. (US 5,809,153).

Re claim 1, Aylward et al. disclose of the directional speaker control system adapted to an audio surround system in which a sound emitted from a directional speaker having sharp directivity is reflected off a wall surface or a sound reflection board seas to produce a virtual speaker, said directional speaker control system comprising: a first directional speaker unit having at least one directional speaker for emitting a first sound toward the wall surface or sound reflection board; and a second directional speaker unit having at least one directional speaker for emitting a second sound which comes to have with an inverse phase at a prescribed listening position with respect to an audio element of the first sound reaching the prescribed listening position directly (fig.2; col.3 line 40-55), the second sound from the second directional speaker unit dampen the audio element of the first sound from the first directional speaker; wherein the first and second directional speaker units both receive a same sound signal, and wherein the second directional speaker unit includes an inversion circuit that inverts the sound signal to generate the second sound at the inverse phase (fig.4, 9; col.3 line 44-60; col.4 line 35-50; with phase shifting and col.3 line 15-40).

RE claim 2, the directional speaker control system according to claim 1, wherein the first directional speaker and the second directional speaker are constituted using_ unit is an array speaker[[s]] unit having a plurality of directional speakers arranged in an array

each for emitting a first sound toward the wall surface or sound reflection board, and wherein the second directional speaker unit is also an array speaker unit having a plurality of directional speakers arranged in an array each for emitting a second sound directly to the prescribed listening position (fig.4; 6-7 wt plurality of array for direct and wall reflect sound).

Re claim 3, the directional speaker control system according to claim 1, wherein the first directional speaker unit and the second directional speaker unit are realized by dividing composed of a single array speaker unit having a plurality of directional speakers arranged in an array, the directional speakers being divided among the first and second directional speaker units (fig.4,6-7/each of plurality of speaker for directional pattern among the array).

4. The directional speaker control system according to claim 1, wherein the second directional speaker unit emits only a low-frequency sound as the second sound (fig.9 wt (32a,b)/to emit low frequency sound)..

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aylward et al. (US 5,809,153) and further in view of Weinrich (US 5,201,006).

5. the directional speaker control system according to claim 1 with the one directional speaker include of a delay and gain adjustment (fig.9D), But Aylward et al. fail to disclose of the specific wherein each of the first and second directional speaker units further includes a delay circuit for delaying the sound signal, a gain adjustment circuit for adjusting a gain of an output signal of the delay circuit, and an amplifier for amplifying an output signal from the gain adjustment circuit and driving the at least one directional speaker, But, Weinrich disclose of a system with similar concept wherein the sound transducer3 unit include a delay circuit for delaying the sound signal, a gain adjustment circuit for adjusting a gain of an output signal of the delay circuit, and an amplifier for amplifying an output signal from the gain adjustment circuit and driving the at least one output unit transducer (fig.3-4; col.3 line 45-55) for purpose of reducing the effect of unwanted feedback through signals paths. Thus, taking the combined teaching of Aylward et al. and Weinrich as a whole, it would have been obvious for one of the ordinary skill in the art to have modify Aylward with the similar concept wherein the sound transducer3 unit include a delay circuit for delaying the sound signal, a gain adjustment circuit for adjusting a gain of an output signal of the delay circuit, and an amplifier for amplifying an output signal from the gain adjustment circuit and driving the at least one output unit transducer for purpose of reducing the effect of unwanted feedback through signals paths.

Re claim 6 has been analyzed and rejected with respect to claim 5 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. P./
Examiner, Art Unit 2615

/Vivian Chin/
Supervisory Patent Examiner, Art Unit 2615